

A free world education eBook

CASEBOOK

OF

BIBHAS DE

WHEN

BABOON'S BUTT

PASSES FOR

ABSTRACT ART

AS THE LIGO FRAUD SUCKS IN TAXPAYER MONEY,
GLAMOROUS PHYSICS ACADEMICS THE WORLD IS
MADE TO ADORE ARE AFRAID TO CALL IT WHAT IT IS

The LIGO Observatory is the bogus-most
contraption science has ever created.
The LIGO universe is late-late-night science fiction.
This eBook is a collection of my graphics on clear
thinkers explaining to you why LIGO is a fraud.
The graphics expose the LIGO camp as a cult of
self-worshipping quacks shooting up adrenaline.

LIGO DISSIDENCE IN HISTORICAL CONTEXT

WHY SO HARSH, BIBHAS DE?



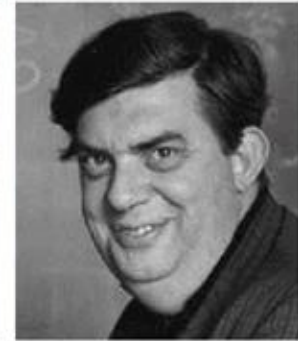
Hannes Alfvén



Fred Hoyle



Halton Arp



Geoffrey Burbidge

LIGO is cosmology, and cosmology dissidence is nothing new. Looking at past dissidence can give us a realistic sense of what will come from LIGO dissidence. Nothing likely will. LIGO will likely go great guns for as long as the LIGO powerbrokers want. I do not let this outcome deter me, but see the need to change tactics.

The men you see above were all prominent scientists and solid academics. Alfvén was my teacher, and Burbidge I knew from being at UCSD. They had their own different ideas about the origin of the universe. What they had in common was that they were all Big Bang dissidents. They exerted themselves strongly, but within the bounds of academic form. In the end they all failed. They died with the despairing knowledge that Big Bang is unstoppable. This is sad. The scientific establishment was complicit against them. Big Bang is a scientific fraud – intricate and intertwined fraud. Because it consumes public money, it is also criminal fraud. So we are dealing with a crime family of Physicsville: *The House Gamow*.

This is how LIGO is also shaping up to be: *The House Thorne*. What I am doing new is to take the matter outside the sphere of polite scientific debate, and to public officials responsible for public money. The other thing new I am doing is using the stark language of public accountability and the effective language of public communication. I am dismantling the carefully concocted images of infallible temple gods, and showing them up for what they are.

THE INTERCONNECTEDNESS OF THE FAMILIES

THE GREAT COSMOLOGY SCAMS

The seemingly unrelated *Cosmic Blackbody scam* and the *Blackhole Merger scam* have common roots deep down



Robert Dicke manipulated Arno Penzias and Robert Wilson to pass off the Penzias-Wilson accidental observation of microwave background as the Big Bang blackbody that Dicke was trying to promote just then



George Gamow, an originator of the idea of Big Bang blackbody and the original Big Bang popularizer, was a guru to blackhole scammer Kip Thorne
“I was much influenced by a guy named by George Gamow who was a cosmologist in the early 20th century. It was his writing that I’ve been able to pass on to the next generation.” -Kip Thorne



Thorne and Rainer Weiss (extreme right), joint LIGO blackhole scammers, were associates of Dicke the blackbody scammer
“I’d met and had been a member also of Robert Dickie’s experimental group which played a major role in the discovery of the cosmic microwave background. ...

So I was tied into that group. Rai Weiss was in that group. He was a postdoc when I was graduate student, so we met there.” -Kip Thorne



Blackhole scammer Weiss was the leader of the COBE satellite team that included John Mather and George Smoot, blackbody scammers

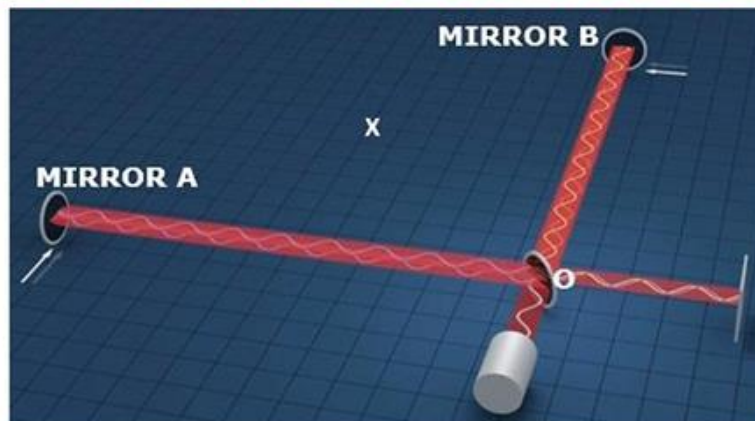
A world education message from Bibhas De 05/09/2016

IN ORDER TO DEMONSTRATE ITS ABILITY TO UNAMBIGUOUSLY DETECT GRAVITATIONAL WAVES, LIGO NEEDED TO EXPERIMENTALLY PROVE ONE THING AND ONE THING ONLY: THE THEORIZED ANTISYNCHRONOUS MOVEMENT OF ITS TWO MIRRORS.

THAT IS THE ONE THING LIGO DID NOT PLAN TO PROVE, DID NOT PROVE, AND CAN NEVER PROVE.

THAT IS ALSO THE ONE DISCUSSION THAT IS BEING METICULOUSLY AVOIDED. →

LIGO INSTRUMENT IN-DEPTH



The LIGO instrument is about measuring the horizontal displacements of the two freely hung mirrors A and B as a gravitational wave (GW) passes by, relative to the stationary reference frame of the instrument before the wave arrived. In conventional physics this displacement is indeterminate. Consider any arbitrary point X anywhere in the LIGO universe where you stand with a Laser Distance Measurer. Can you measure in real time the movement of the two mirrors? No, because you are also moving when the GW is passing by.

This is where Nobelist Rainer Weiss's legendary genius of measuring the *difference* in the displacements of the two mirrors comes in. The method works in the interferometer because of the GW theory that as one mirror moves towards O, the other moves away from O. The two mirrors move antisynchronously. A nonzero phase shift $\Delta\phi$ results between the two laser beams returning to the detector O from the two mirrors. The legendary boo-boo with this technique is that you can never demonstrate this antisynchronicity which is not a given but something *for the experiment to prove*. You cannot prove this because of what I said in the preceding paragraph. Any physicist who believes in *The Raister Bootstrap* is a loser.

Duty to Inform

A world education message from Bibhas De 01/07/2019

LIGO FRAUD EXPLAINED IN PLAIN TEXT

So Kip Thorne makes two independent theoretical assumptions on the sky: (T1) Models of merging black holes; (T2) Emission of gravitational waves (GW) therefrom. Rainer Weiss makes two independent (of each other, and of T1 and T2) experimental assumptions on the ground: (W1) Two mirrors ~ 6 km apart move in invisible entanglement when GW passes by; (W2) Movements of the mirrors smaller than Heisenberg uncertainty can be measured as precision macroscopic lengths. All in all, we have four independent assumptions to validate before we can talk of a discovery.

Kip whips out his sky wiggles and emails them to Rai. Rai fires up his machine and presto, those sky wiggles appear at the readout of his computer. Gravitational wave *is discovered*, because this wiggle match is said to implicitly validate all four independent assumptions T1, T2, W1 and W2. But how? Mr. GW must have somehow whispered into the ears of Kippy Boy and Raister his travel tales of how, as he was making his trek from his birthplace to the LIGO readout, has experienced all the four effects along the way. Every unknown and unknowable (and highly questionable) effect invoked to make the discovery possible now stands attested to by the discovery itself! A kind of Jedi bootstrap? Or a Zen one-handed clap?

If any one of the four assumptions fails (so far none is validated), **LIGO readout can contain nothing about any GW**. But all this is academic anyway. Because the size of LIGO is infinitely small compared to the wavelength of the alleged GW, even an idealized LIGO (without any noise) is scientifically incapable of sensing GW, much less of reproducing the sky wiggle at its readout. That's just unavoidable basic physics. By this, **LIGO readout can contain nothing about any GW**. So, in slyly engineering the uncannily perfect wiggle match, the over-clever boys actually shot themselves in the foot. This match itself is the most telling evidence of fraud. This match is also what led to the Nobel Prize in Physics in 2017. Lord have mercy!

Duty to Inform

Bibhas De 10/10/2018

GRAVITATIONAL WAVES ARE NOT ELECTROMAGNETIC OR ACOUSTIC WAVES, BUT THEY *ARE* WAVES.

THIS MEANS THAT BASIC WAVE BEHAVIOR APPLIES.

THAT BEHAVIOR INCLUDES SOME LIMITATIONS ON WHAT WAVES CAN DO. →

LIGO FRAUD IN PHYSICS GUT

I am no kind of genius, and yet when I first read the LIGO description, I went "OMG!" That is precisely the dilemma: So splendiferous an aura of genius has been hung around LIGO that we *hoi polloi* cannot see straight. But the truth is that we are not dealing here with supercalifragilisticexpialidocious geniuses. We are dealing with wily fraudsters. That realization is the beginning of wisdom. Once you are thus freed, you can readily sense the LIGO fraud in your physics gut.



LIGO's close electro-magnetic analogy is this: A crossed dipole antenna with arm length L much smaller than the wavelength λ ($L \ll \lambda$) is observing a radiation field in the sky that is unpolarized except that there is a small directionality to the polarization. In the plane perpendicular to the look direction, the electric field is slightly larger in one direction than the orthogonal direction. So, we may expect that if we difference the powers received by the two dipoles, we will have a small nonzero "signal". However, in reality the difference signal will be nearly zero, with no information about polarization. This is because under the condition $L \ll \lambda$, an antenna cannot discern anything about the wave (its direction or its polarization). *A probe must occupy a substantial portion of a wavelength to sense any property of the wave.* This is fundamental wave behavior. So here is not a conventional, if tough, discovery issue of measuring a small but meaningful signal (as they had us believe), but an elaborate scam to detect a totally irrelevant near-zero power level. One billion \$ and counting. NSF has made us feed and clothe a thousand fraudsters for four decades.

LIGO PHYSICS FOR YOUR KIDS

OK kids, let's talk about the LIGO discovery machine. Let me explain this in words only – without figures and equations. Imagine a metal cross with two equal arms. Lay it down on a table. Now gravitational wave (GW) comes down on the table. The LIGO machine theory says that, at any given instant of time, the wave compresses one arm and stretches the other arm. So the equal-length arms become of unequal lengths. Let us call this phenomenon *a differential effect*. LIGO reportedly measures the nonzero difference in the two lengths, and from this difference, infers the presence of the GW and deduces its properties.

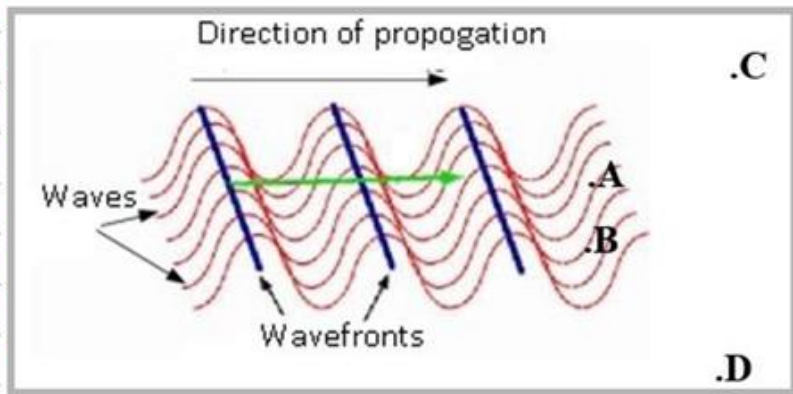
This theory misses entirely the wave nature of gravitational wave. There are two lengths to be considered: The length of the arm of the cross, and the wavelength of the GW. When the arm length is less than about one-third the wavelength, the cross cannot feel the differential effect. The change in lengths of the arms will be equal, and approach zero.

The basic physics of waves says that when a physical structure encountered by a wave is smaller than about one-third the wavelength, the wave cannot "resolve" the structure. What this means in plain language is that the GW does not see the cross as an oriented two-armed structure, but sees it as a fuzzy dot. In the case of LIGO, the cross is infinitely small compared to the wavelength, and so **LIGO response can contain no information about GW** even if it exists and the theory of the differential effect is correct.

Clearly then, there is no way to salvage the LIGO machine. It is a billion-dollar piece of junk.

LIGO PHYSICS FOR YOUR KIDS II

OK kids, let's talk more about the LIGO discovery machine. Today we want to talk about *triangulation* – the process by which LIGO determines the direction of a source of gravitational wave (GW) on the sky. LIGO determines the time lags Δt between the arrivals of the GW at three stations on Earth. From these it pins down the direction of the GW.



We discuss a two-station case, but it can easily be extended to 3 stations. Consider the figure. A wave is coming at you, and you have set up two

stations A and B. We assume you know the velocity v of the wave. If you determine that the wave arrives Δt secs later at A than at B, draw a circle around A of radius $v\Delta t$. Now draw a line through B and touching the circle at A (tangential to the circle.) This line is your determined wavefront. You now know the direction of the wave. Do the same with C and D.

Now, as we discussed in the previous lesson, if the distance between two stations is roughly on the order of or smaller than the wavelength, the wave cannot resolve them, i.e. cannot see the two stations as separate locations. So any Δt that you measure will not be the proper time lag. If the station separation is much longer than the wavelength, you are fine to use this technique. AB is no good; CD is OK. LIGO includes the AB situation and cannot triangulate. But this point is irrelevant because LIGO cannot even detect GW.

LIGO PHYSICS FOR YOUR KIDS III

OK kids, consider the signal-to-noise issue, assuming LIGO is a sound instrument. When a mirror moves along its axis, there are generally two causes: "displacement" x_{gw} due to the gravitational wave (GW), and X_n due to all kinds of noise. The net displacement is $X = x_{gw} + X_n$ (X 's and x 's can be + or -). Likewise, for the other mirror: $Y = y_{gw} + Y_n$. (with $y_{gw} = -x_{gw}$; X_n, Y_n are independent). The interferometer responds to $X-Y$. Now, we know that $x_{gw} \sim 10^{-19}$ m. But what is X_n ? To find the answer, consider what LIGO says:

In LIGO's suspensions, this process results in the magnitude of the vibrations that reach LIGO's critical 'test masses' being 100-million times smaller than the vibrations that 'shook' up the very top of the suspension system!

Here the test masses are the mirrors. Let's say magnitude here means the amplitude of vibration. So, if d is the amplitude of vibration of the LIGO support structure, then

$$X_n \sim 10^{-8} d \text{ m}$$

If however magnitude means the energy of vibration:

$$X_n \sim 10^{-4} d \text{ m}$$

The quantity d can be anything depending on its source (earth tremors, vehicles passing by, vibrations induced on LIGO by geomagnetic disturbances, etc.) Let's say d is as small as 1 μm . Then if magnitude means amplitude:

$$X_n \sim 10^{-14} \text{ m} \sim 10^5 x_{gw} \quad (\Rightarrow \text{GW Signal NOT detectable})$$

And if magnitude means energy:

$$X_n \sim 10^{-10} \text{ m} \sim 10^9 x_{gw} \quad (\Rightarrow \text{GW Signal NOT detectable})$$

\Rightarrow *Noise present*: GW cannot be detected. *Noise absent*: Since x_{gw} (after LIGO amplifies it 300-fold) $\sim 10^{-10} \lambda$ (λ = laser wavelength, $\sim 10^{-6}$ m), x_{gw} cannot be detected by the interferometry technique. **Thus LIGO never responds to GW.**

THE CENTRAL STUPIDITY

of the thousand-man LIGO clan

Here's how Thorne-Weiss LIGO science works: A modeled wiggle (gravitational wave "strain" pulse train) from a modeled black hole merger is incident on LIGO. This is the *input wiggle*. The wave squeezes one LIGO arm while stretching the orthogonal arm. The interferometer measures the tiny differential length change of the arms. This change (strain) is the *output wiggle*. So, if these input and the output wiggles match, the theory and the model on the sky and the unbelievable assumptions about the instrument are all validated in one fell swoop. If you happen upon a stage and see a portly lady singing there, it must mean an entire opera has taken place, right?

This is mind-numbing stupidity (later turned fraud), and is an attempt to avoid the correct scientific procedure of determining the *Instrument Transfer Function* (which, understandably, is indeterminate. LIGO is not a valid instrument.) Because the LIGO arms are infinitely small compared to a wavelength, they do not function independently. *So they cannot sense the said orthogonal differential effect* even if the gravitational wave exists and has this property. LIGO science excludes this wave physics. So the change (the output) is zero. All this I explained in my book, and also presented in the following diagram in this blog to alert potential prize givers. As you know, the prizes were given out.

The morale: *Never try to teach a pig to sing. It wastes your time, and it annoys the pig.*

Bibhas De 10/18/2018

IS THE LIGO UNIVERSE A DOOZIE OR WHAT?!

The experimental data gathered by LIGO is in volts, from optoelectronic conversion. This means absolutely nothing until converted to length (meters). This is why LIGO calibration is *all-important*. Everything rests on it. The LIGO universe rests 100% on it. We could have fun with discussing the jury-rigged calibration set up, but it is not necessary to go there. Just consider:

Uncertainty in LIGO displacement measurement $\sim 10^{-19}$ m

Actual LIGO displacement measurement $\sim 10^{-19}$ m

Displacement for which LIGO is "calibrated" $\sim 10^{-16}$ m

So the calibration range is not only orders of magnitude clear of the measurement range (as Wolfgang Engelhardt alerted the Nobel Committee), it also cleanly avoids addressing LIGO's central falsehood that lengths in quantum uncertainty range can be measured as precision macroscopic lengths. LIGO strain data is raw sewage (as the Danes and Akhila Raman said in more polite language.) LIGO made discoveries?! Sure, a Nobel Prize says so.

Duty to Inform

A world education message from Bibhas De 12/09/2018

LIGO GRAVITATIONAL WAVE DISCOVERY REAFFIRMED BY



Ace data analysts at Perimeter Institute have *independently* confirmed LIGO discoveries. A fully vindicated Frans Pretorius of Princeton said that for more than a year, he and most of the physics community have been satisfied that "LIGO analysis, and its discovery, are sound." Now folks, here's a little mundane *hoi polloi* physics for your consideration:

Displacement produced by GW, $\Delta x \sim 10^{-19}$ m

After amplification (x300) by LIGO, $\Delta x' \sim 10^{-16}$ m

LIGO laser wavelength, $\lambda \sim 10^{-6}$ m

So, the phase shift produced by GW between the two laser runs at the LIGO detector face:

$$\Delta\phi \sim 360 (\Delta x' / \lambda) \sim 3.6 \times 10^{-8} \text{ degree}$$

$$\text{LIGO GW signal strength} \sim \sin^2 (\Delta\phi) \equiv 0$$

The minimum detectable phase shift in laser interferometry is ~ 1 degree. How can one tease out of the LIGO data stream a picture perfect gravitational wave on the sky when the instrument on the ground has not detected any?

Duty to Inform

A world education message from Bibhas De 12/15/2018

TEMPLATELESS LIGO DISCOVERY!

(OR, *Look Ma, no hands!*)

An 86 years old polymath and a young whippersnapper at the Perimeter Institute just bowled us over by extracting a perfect gravitational wave from LIGO *without* the use of any templates.

DEFINITIONS:

$d(t)$ = LIGO data string

$W(t)$ = GW waveform modeled by Kip Thorne

$w(t)$ = GW waveform extracted from data (with template)

(t_1, t_2) = Time window found for above waveform

$A_i(\omega_i), a_i(\omega_i)$ = Frequency domain amplitudes of $W(t), w(t)$

"WITH TEMPLATE" TECHNIQUE: After noise removal, the template $W(t)$ is slid across $d(t)$ – in time/frequency domain – until a match is found in one station, followed soon by a match in another station. Discovery $w(t)$ results.

"WITHOUT TEMPLATE" TECHNIQUE: So they do not use $W(t)$ at all! Instead, they take only the (t_1, t_2) window. They do not use $A_i(\omega_i)$ at all, but instead just use ω_i . And hey presto, the exact same match as "WITH" results. *Look Ma, no hands!*

THE SCAM: Of course if you have removed from the window (t_1, t_2) the noise with the same or similar algorithm as the "WITH" camp, then for frequencies ω_i you recover the selfsame $a_i(\omega_i)$ data! Reconstitute this and get the exact same $w(t)$ as the "WITH" camp. The two techniques are one and the same.

THEN WHAT IS $w(t)$? This is a "ringing" of the LIGO instrument triggered by some global geomagnetic event – most likely Schumann resonances. The ringing may also contain upchirp (consider inertia etc.) The EM signal can be fitted to Kip's GW template $W(t)$ because of the enormous leeway in tweaking $W(t)$. Also, tweaking the noise algorithm may "aid" this.

Duty to Inform

A world education message from Bibhas De 12/18/2018

THE LIGO WIGGLES

Orientation for the attendees of LIGO-centric
Lindau Nobel Laureate Meeting 2019, Starmus 2019



LIGO's 4 km long steel tubes are perfect attractors of electromagnetic (EM) disturbances, especially of the geomagnetic kind. If the signals are global (detected at two or more stations), they are likely to be Schumann resonances or EM disturbances related to solar-terrestrial relation.

How do such disturbances generate an output wiggle at the LIGO readout? A part of the EM disturbance penetrates through the thin metal wall of the LIGO tubes (consider the skin depth) and generates currents in the innards. The presence of the Earth's static magnetic field causes these currents to induce mechanical vibrations of the innards, and these vibrations are detected by the laser interferometer. These are macroscopic movements that can generate detectable phase shift in the interferometer.

LIGO's heavy mirrors (~40 kg each) take some time to get going under this external force. But slowly they pick up speed and amplitude and increase in frequency. Then, as the force recedes, the mirrors relax and come to rest. (Think of pushing a kid on a park swing.) These three stages are passed off as *inspiral*, *chirp* and *ringdown* stages of a gravitational wave.

Gravitational wave produces alleged mirror movements on a quantum scale and does not have detectable phase shift. The two mirrors are never in entangled motion. This is as unprovable as it is unbelievable. LIGO catches gravitational waves the same way a dreamcatcher catches dreams.

Duty to Inform

A world education message from Bibhas De 12/20/2018

A QUESTION OF SCIENTIFIC QUALITY

THE FOLLOWING SERIES OF GRAPHICS IS INTENDED ESPECIALLY TO ILLUSTRATE THE DIFFERENCE IN EVALUATIVE AND REFLECTIVE QUALITY BETWEEN THE LIGO PROMOTERS AND LIGO OPPOSERS.

IT IS ALSO A CAUTION TO YOU NOT TO BE INFLUENCED BY ACADEMIC GLARE, MEDIA PROMOTION, PHILOSOPHICAL POSTURING ETC OF THE PROPONENTS, AND THE LACK OF THESE IN THE DISSIDENTS.

WHEN YOU GET DOWN TO THE BRASS TACKS, THE OPPOSERS ARE THE ONES WITH NOTHING AT STAKE AND NOTHING TO GAIN. THEY ARE DOING THIS THANKLESS OPPOSING AS A CIVIC RESPONSIBILITY. →

LIGO DISCOVERIES: PROPONENTS vs DISSIDENTS

QUALITY OF EVALUATION

"THE SMARTEST MAN ON THE PLANET"



"This amazing achievement lets us observe for the first time some of the remarkable workings of Einstein's theory. Theoretical ideas about black holes which were close to being science fiction when I was a student are now reality."

- *Edward Witten*

THE PARIAH OF INDIAN PHYSICS DOM

"And in case, the LIGO claims of detection of gravitational waves are true, they may be confirming that the pertinent compact objects are BH (Black Hole) mimickers and not true BHs. This is so because LIGO signals may be superimposed by echoes too [58]. And there cannot be any echo of gravitational or any other wave from true BHs which are vacuum surrounded by event horizons. And thus potential detection of echoes might be the direct evidence for non-existence of true BHs."



- *Abhas Mitra*

Edward Witten's comments reflect the general quality of the scientific establishment's evaluation of the LIGO discoveries: unthinking, uncritical, bombastic, and knee-jerk. His comment above accompanied the rapid award of the \$3 million Breakthrough Prize to LIGO. Abhas Mitra is on clear record (and acknowledged by some) as a more advanced thinker on black holes than Stephen Hawking. But somehow he pissed off the Indian physics establishment which sidelined him. So it is with the establishment's LIGO evaluation: They ride for the brand.

Duty to Inform

A world education message from Bibhas De 01/11/2019

LEMMA ON LIGO DISCOVERY OF GRAVITATIONAL WAVE **ENDORERS : OPPOSERS = BEAUTY : BRAIN**

Here we have a quintessential representative of the establishment endorsers of the LIGO discoveries. Dijkgraaf is a string theorist and a happening philosopher. Johnson is an Applied Mathematician, with a reputation of being a rebel. The exact same point about LIGO makes one talk pretty and the other think. The distinction between endorsers and opposers cannot be made any clearer. We are well into *The Age of Fakery*.

ROBBERT DIJKGRAAF, IAS, PRINCETON UNIVERSITY

“It is equivalent to seeing light for the first time,” said physicist Robbert Dijkgraaf, director of the Institute for Advanced Study in Princeton, N. J., where Einstein once worked. “It is poetic that the most intense collisions in the history of the universe are measured with the most delicate instrument we have ever built.” – *WSJ*



CLAES JOHNSON, ROYAL INSTITUTE OF TECHNOLOGY, STOCKHOLM

“We see a combination of a biggest possible cause/input and a smallest possible effect/output in a certain mathematical model. The conclusion comes from using this mathematical model in inverse form, where a smallest possible signal is used to identify a biggest possible origin of the signal.



This means that the mathematical model in inverse form is extremely **ill-posed** and as such cannot be used to draw conclusions. To do so requires that all alternative explanations of the zero signal can be eliminated, and it is then not enough to just say that no other explanation immediately suggest themselves, that is to draw conclusions from ignorance with the precision of the conclusions increasing as the ignorance or stupidity grows.” - *His blog post titled “Absurdity of Modern Physics”*

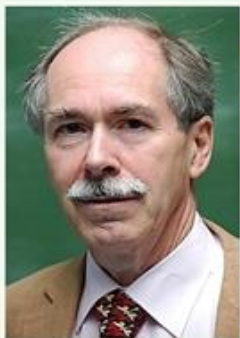
Duty to Inform

A world education message from Bibhas De 12/11/2018

Newton's apples, LIGO apples



STEPHEN CROTHERS: General Relativity is a nonlinear theory. This means that the Principle of Superposition does not hold. In other words, if X is some black hole universe and Y is another black hole universe, and Z is some big bang universe, then $X+X$ is not a universe, $X+Y$ is not a universe, $X+Z$ is not a universe, $X+Y+Z$ is not a universe, $Z+Z$ is not a universe, etc. To obtain multiple black holes within some big bang universe, the Authors and LIGO simply superpose, in direct violation of the mathematical form of Einstein's Theory of General Relativity.



GERARDUS 't HOOFT: Just because gravity is non-linear, you can't have more than one black hole in the entire universe, is one of (Crothers') messages. In a systematic perturbation expansion one can compute the interactions, due to non-linearity, between black holes. This, however, is something he does not want to hear about. You can have one apple, but because its smell is a non-linear function of its distance, you can never have more than one apple in the entire universe.....(update) Since the above was written, LIGO's gravitational signal was followed by more such signals....Indeed, the linearised equations were used, which are accurate up to 20 decimal places or so.

Gerardus 't Hooft is a formidable theoretical physicist (and a Nobelist). I respect him. But it seems to me that he misses the point. Crothers makes a fine point about logical validity of the underlying LIGO theory framework while 't Hooft turns this into a numbers issue. At any rate, 't Hooft labors under the false premise that LIGO has observed gravitational waves. Not his fault. He has been duped. Crothers is right twice: He is right as far as the point he makes. He is also right that LIGO is a fraud. So Mijnheer, don't deride the Mate so much! He had the rare scientific gut to see through LIGO directly the supercalifragilisticexpialidocious discovery was announced.

Duty to Inform

A world education message from Bibhas De 12/22/2018

OPPOSITE VIEWS ON LIGO LIGHT



Light always moves at the same, constant speed...when a gravitational wave passes through each arm, lengthening or shortening the arm, it also lengthens or shortens the wavelength of the light within it by a corresponding amount....This seems like a problem on the surface: if the light is lengthening or shortening as the arms lengthen or shorten, then the total interference pattern should remain unchanged as the wave passes through. ...But that's *not* how it works. ...What is important is the amount of time the light spends traveling through the arms!...When a gravitational wave passes through one of the arms, it changes the effective length of the arms, which therefore changes the amount of distance each laser beam needs to travel. One arm will lengthen, resulting in a longer light-travel time, while the other shortens, resulting in a shorter light-travel-time. As the relative arrival times change, we see an oscillatory pattern in how the reconstructed interference pattern shifts. – Ethan Siegel, blogger on *FORBES Magazine*



It is proved strictly based on general relativity that two important factors are neglected in LIGO experiments by using Michelson interferometers so that fatal mistakes were caused. One is that the gravitational wave changes the wavelength of light. Another is that light's speed is not a constant when gravitational waves exist. According to general relativity, gravitational wave affects spatial distance, so it also affects the wavelength of light synchronously. By considering this fact, the phase differences of lasers were invariable when gravitational waves passed through Michelson interferometers. In addition, when gravitational waves exist, the spatial part of metric changes but the time part of metric is unchanged. In this way, light's speed is not a constant. – Polycarpo Yoshin Ulianov (Electrical and AI engineer) *et al*

01/15/2019

LIGO: PROFESSOR PROPOSES, BLOGGER DISPOSES

THE TOWN IS SMARTER THAN THE GOWN



There's a bunch of different variables which characterize the black holes. I mean it may sound simple but they can be spinning, and depending on their orbits and that sort of thing. There's a lot of parameters, maybe several parameters that go into it. But in the end it's just some parameter so we might have a five or 10 dimensional waveform space that we search through. But it is just a big catalog of waveforms, little wavelet looking things. And so for all these signals that can possibly come from black holes, we think we can search for them just by comparing with a known template. – Ligonaut Rana Adhikari, Caltech professor



After filtering the noise the best they could, the researchers looked for any type of strong waveform patterns with "durations up to a few seconds" buried in the random noise. They then compared these strong signals to "approximately 250,000 template waveforms" until they found a match in both detectors within 10 milliseconds of each other. That's akin to waiting for one of a quarter million sequences of numbers to appear almost simultaneously between two continually running random number generators. In fact, the LIGO team's own signal processing tutorial clearly shows that after all the filtering and processing it really is just a matter of complex numerical pattern matching. The probability statistics presented in the paper are meaningless in light of this skewed method of research. *Given enough time with that many acceptable patterns, an eventual match was guaranteed.* – Blogger Shannon Sims, PLASMA PICS

Duty to Inform

A world education message from Bibhas De 01/12/2019

THADDEUS GUTIERREZ DOES NOT APPEAR TO HAVE ANY BACKGROUND IN COSMOLOGY – WHICH IS A GOOD THING. HE HAS TAKEN THE LIGO DATA WITHOUT ANY PRECONCEIVED BIAS, AND APPLIED HIS EXPERTISE TO ITS CORRELATION WITH GEOMAGNETIC EVENTS PURELY AS A DATA PROBLEM.

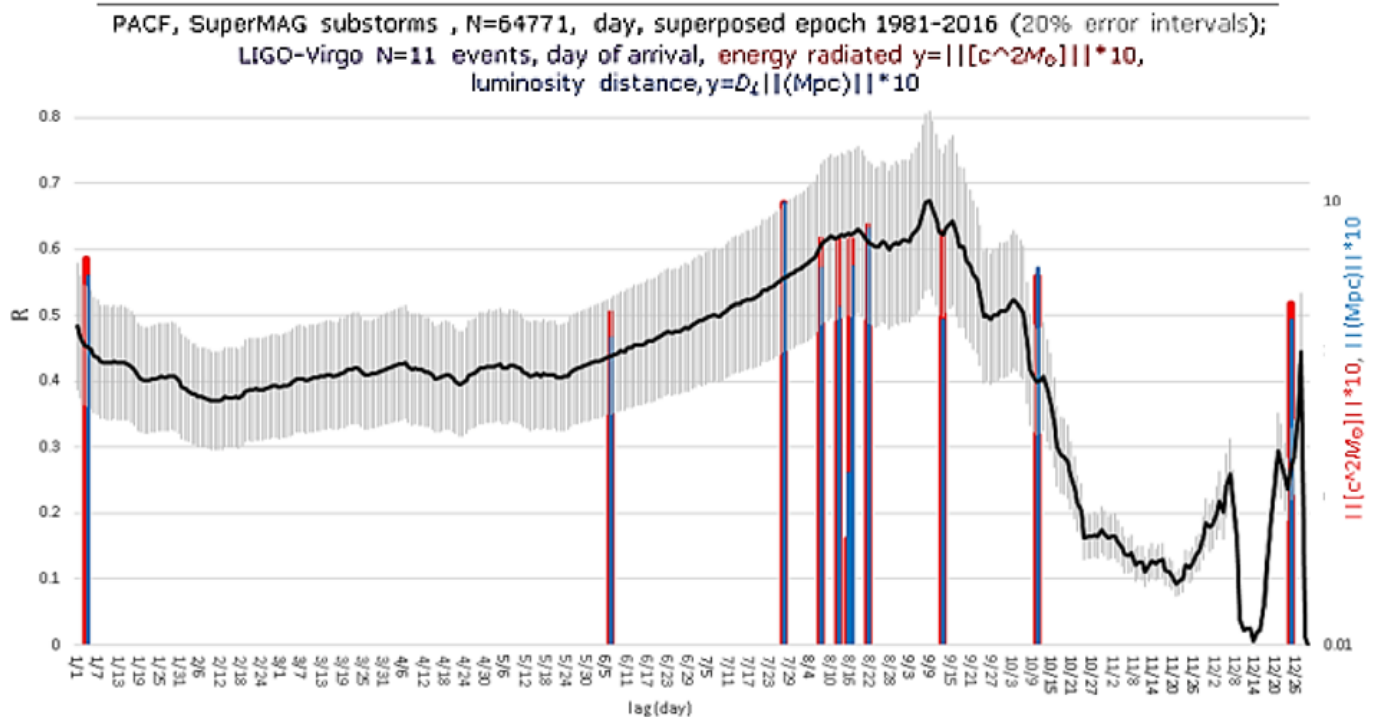
HERE IS THE ENTRY POINT TO HIS STUDIES:

<http://fulguritics.blogspot.com/2018/06/continent-wide-blitzortung.html>



LIGO DISCOVERIES AND THE GUTIERREZ DIAGRAMS

While many have suggested geomagnetic disturbances as possible sources of LIGO signals, Thaddeus Gutierrez has done correlation studies of LIGO events with actual geomagnetic disturbance cycle data. Here is a typical diagram studying time and energy correlation of all eleven LIGO events to date with past geomagnetic substorm cycle.



<http://fulguritics.blogspot.com/2018/06/continent-wide-blitzortung.html>

01/12/2019

THE CORRECTNESS AND THE COMPETENCE OF LIGO DATA ANALYSIS HAVE BEEN A BURNING ISSUE.

THE LIGONAUTS HAVE MAINTAINED A HAUGHTY STANCE IN THIS REGARD, BARELY BUDGING TO ANSWER ANY CRITICISMS.

THERE IS HERE A SERIOUS QUESTION: ARE THEY HIDING BUNGLING INCOMPETENCE UNDER THEIR ARROGANCE.

HERE IS AN ANALYSIS BY AN EXPERT WHO HAS APPLIED HERSELF TO REAL LIFE PROBLEMS OF REAL LIFE CONSEQUENCES, AND THUS HAS A BROADER AND MORE DIVERSE EXPERIENCE BASE THAN THE LIGONAUTS.

THIS IS WHY IT IS IMPORTANT TO HEAR WHAT SHE HAS TO SAY.

HERE'S THE REFERENCE:

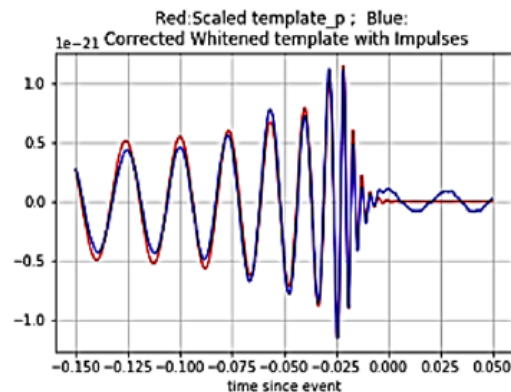
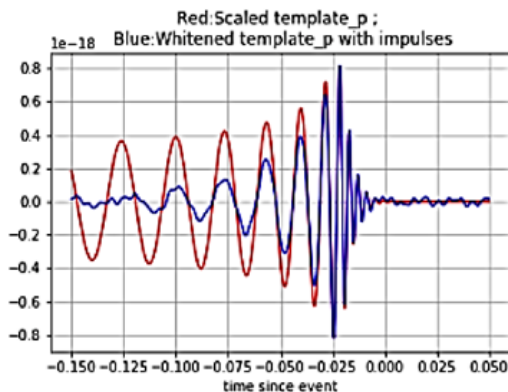
On the Signal Processing Operations in LIGO signals

<https://arxiv.org/abs/1711.07421> →

ARE LIGO DATA ANALYSTS WET BEHIND THE EARS?

THE OVERLOOKED CONTRIBUTION OF AKHILA RAMAN

Akhila Raman, a signal processing expert at UC Berkeley, has made what appears to me to be most important contributions in analyzing LIGO's analysis procedure. Strangely, her work appears to have received little attention. I am no expert in this area, but those who are need to pay serious attention to her alarming conclusions. Let me exemplify what I am saying by showing a little bit that I *can* understand. In this diagram she is showing how LIGO whitens (removes certain known interferences) their data (left) and how she would have done so (right). The red is the ideal LIGO template, and blue is template corrupted with said interferences.



This alone tells me right away that the Ligonauts may not be what they haughtily profess to be: The ultimate authority in data analysis whom no one may question. Raman believes that LIGO never detected gravitational waves. There she's right.

Duty to Inform

A world education message from Bibhas De 01/15/2019

DO NEW LIGO DETECTIONS INVALIDATE CRITICISMS?

LIGO is just out with report of a new crop of detections. With it comes the promise of even more accelerated detections when the third observational run O3 begins in early 2019.

What do these new reports say about the copious criticisms of LIGO from scientists the world over? Absolutely nothing. The criticisms stand. Let me explain.

Suppose that XYZ Corporation has sold 100 perpetual motion machines. Then many criticisms are voiced. Then the adamant company sells 1000 more perpetual motion machines, and starts a new production run. Does this invalidate the criticisms?

If anything, the Ligonauts are compounding their fraud and duping their governments and hence the citizenry. The commencement of O3 represents a victory of XYZ Corporation over the critics. Victory of evil over good.

Let me paraphrase from a well-known quotation:

The only condition necessary for waves upon waves of science fraud to engulf us is for good scientists to say nothing.